

As to the cases in which amyl nitrite has the reverse effect, and produces a lowering of the scale, in some cases abolishing a diastolic murmur, we speak with more diffidence, yet it is extremely suggestive that this reversal of the usual effect has been witnessed for the most part in cases in which aortic regurgitation was undoubtedly present, and where consequently the murmur may have owed its origin to a different cause (Flint murmur).^{*} Whether it will prove ultimately that the test serves to differentiate the Flint murmur remains for the future to decide; so far as military diagnosis is concerned, it is a point of lesser importance; the point for which publicity is desired is the usefulness of the drug in bringing out clear presystolic murmurs in cases in which mitral stenosis is suspected but not proved.

A PYLON, OR TEMPORARY ARTIFICIAL LEG.

BY

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AFTER amputation through the thigh or leg there is, as is well known, progressive diminution in the girth of the stump, owing to muscular wasting; consequently the "bucket" of an artificial leg, which fits accurately at the time of fixing, will in a few weeks become loose.

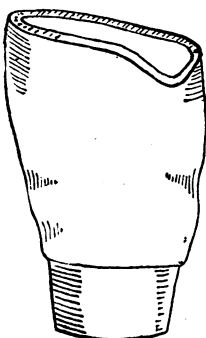


FIG. 1.—Plaster cast of stump (hollow).

It occurred to me that the bucket for a temporary leg might be made of papiermâché, which could be broken up and replaced or remoulded, if necessary, periodically, until the stump reached its minimal circumference.

It was believed also that by arranging for the end of the stump to be subjected to graduated pressure by padding the floor of the bucket, the weight-bearing power of the stump would be improved.

The main principles of the leg were explained to Mr. J. D. Danson, technical instructor in the curative workshops, Alder Hey, and as a result of his expert advice and experiments the temporary artificial leg here described was made.

An accurate cast of the stump, up to a height of 15 in., if available, is taken in plaster-of-Paris (Fig. 1); on to this plaster cast a layer of soft felt is sewn (Fig. 2); this in turn is covered with a layer of papiermâché, about $\frac{1}{8}$ in. thick. (The papiermâché is made by boiling in water disused tram tickets, paper, etc., straining, and mixing



FIG. 2.—Cast covered with felt and papiermâché.

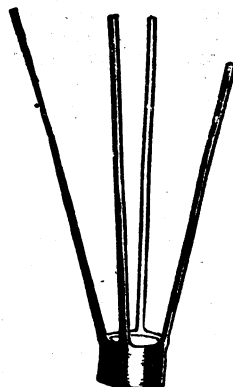


FIG. 3.—Metal rods which support the papiermâché.

with whiting and glue.) A wooden base is fitted to the floor of the bucket thus formed, the paper bucket is then reinforced by four light metal bars, which are welded at their lower ends into a tube, into which is fitted the wooden peg (Fig. 3). If the bucket is made to fit a stump below

^{*} Thus out of ten cases of aortic disease in which a presystolic or diastolic rumble was audible at the apex, suggesting stenosis, the murmur cleared entirely under amyl nitrite in five instances.

the knee, the leg has a hinge-joint at the knee, to allow either a partial or complete range of movement at that joint (Fig. 5).

The leg provides an accurately-fitting bucket for the stump. It can be fitted as soon as the stump is healed, and

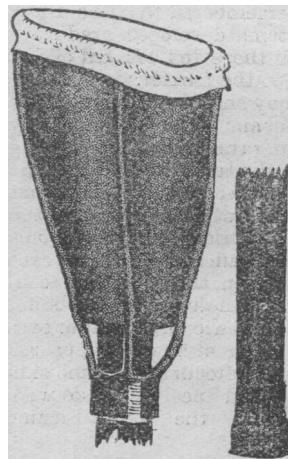


FIG. 4.—Complete pylon (for thigh stump).

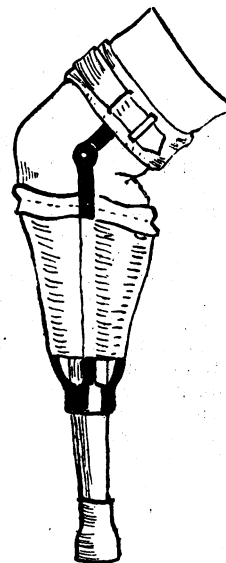


FIG. 5.—Pylon for leg with knee hinge.

the use of crutches and the consequent risk of crutch-palsy obviated. The leg is not to be too light, so that the muscles may receive adequate training. The patient is early familiarized with the wearing of a bucket and also with the gradual transmission of his weight to the end of the stump; he can regulate the pressure by adjusting the thickness of the pad at the bottom of the bucket. The cheapness of the material permits of the renewal or remoulding of the bucket at a trifling cost.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE FARADIC CURRENT FOR THE IDENTIFICATION OF MUSCLES DURING OPERATION.

IN certain operations difficulty may be experienced when searching for structures which lie between separate muscles; for instance, in ligaturing the ulnar, radial, or anterior tibial arteries or in dealing with their corresponding nerves. Such operations are more common than usual now in consequence of war injuries, and the difficulty in defining the limits of two adjoining muscles is increased by scar tissue which naturally lies in the line of the operation.

Such operation can be much simplified by the use of the faradic current. This may be applied locally to the surface of one or other muscle before the fascia is divided or even before the skin incision is made, or it may be applied to the nerve above the field of operation if the muscles have a separate nerve supply. The current may be applied so as to give a series of twitches or the muscle may be kept in a state of contraction as long as is needed. Not only does this show the limits of each muscle, but it also makes the separation of the muscles easier if one is kept contracted while the other remains flaccid.

I recently had the opportunity of using this method in a case of bullet wound of the middle of the forearm in which the subsequently formed scar tissue had involved the ulnar nerve, causing typical ulnar paralysis and anaesthesia. On cutting down to the fascia in the line of the nerve no distinction could be made out between the flexor carpi ulnaris and the flexor sublimis digitorum; these muscles were also bound together by scar tissue. On applying the electrode to the ulnar nerve behind the elbow the flexor carpi ulnaris was at once defined, and, after the fascia was divided, there was no difficulty in